

A SURVEY OF FIRE RATING PRACTICES IN THE KENYA INSURANCE MARKET

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A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT
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ABSTRACT

Insurance rate making is the process of establishing a premium rate for a particular class of insurance. The rate is the price of a unit of insurance. The premium, say for a particular building, is arrived at by multiplying the sum insured i.e. amount of insurance coverage by the premium rate.

Adequate rating is essential if profitable business is to be written. In a competitive market the price of insurance like that of other services is to a large extent determined by forces of demand and supply. With too many operators on the supply side there is a danger the price might not be right.

This study set out to establish the perils and factors that affect rating of fire insurance and the practices adopted by insurance firms underwriting fire risks in a competitive environment.

A survey was therefore carried out so as to meet the objectives of the study. The main objectives of the study were to identify factors considered during fire rating and the practices adopted by insurance firms to cope with competition.

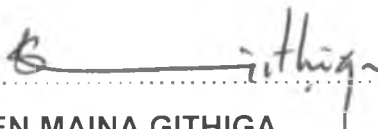
The survey was carried out among all insurance companies who underwrite general business including fire. Questionnaires with both open and closed ended questions were used to collect data.

The main findings of the survey are that fire rating is affected to a very large extent by explosion perils, earthquake perils, storm and flood perils, collision and impact perils, riot and strike perils, subsidence and ground heave perils and malicious acts perils. The findings also revealed that the industry has suffered substantial losses totaling to over 4.7 billion shillings in the last decade as a result of fire and that fire rating practices are not standardized.

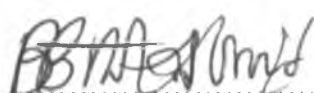
In the light of these findings it is recommended that the industry formulates generally accepted fire rating guidelines and sensitizes its clients on the benefits of good housekeeping so as to minimize risks and hence avoid huge claims resulting from fires.

DECLARATION

This project is my original work and has not been presented for a degree in any other university.

Signed  Date 31-1-2005
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This project has been submitted for examination with my approval as the university supervisor

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To all of you, thank you and may God bless you.

DEDICATION

To my family

Lucy, Brian and Collins

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1.1 Insurance Concept

Insurance can be defined as an economic device whereby the individual substitutes a small certain cost (premium) for a large uncertain financial loss that would exist if it was not for insurance.

After a careful study, the commission on insurance terminology of the American Risk and Insurance Association (AIMR) has defined insurance as follows:-
“Insurance is the pooling of fortuitous losses by transfer of such risks to insurers, who agree to indemnify insureds for such losses, to provide other pecuniary benefits on their occurrence, or to render services connected with risk” Bulleting of the Commission on Insurance Terminology of the American Risk and Insurance Association (October 1965).

The concept of insurance existed in early Rome where Romans gathered and contributed funds for burial costs.

In Africa the concept of insurance existed in the early ages where communities like the Kikuyu in Kenya, Susus in Ghana and Ukoob in Ethiopia assisted members of their communities who had been affected by natural calamities like funeral, crop failure, floods etc.

1.1.1 Rating Concept

An insurance rate is the price per unit of insurance. It is the price charged for each unit of protection or exposure. Like any other price it is a function of the cost of production. However in insurance unlike other industries, the cost of production is not known when the contract is sold and it will not be known until sometime in the future when the policy has expired (Vaughan, 1999).

The fundamental difference between insurance pricing and the pricing function in other industries is that the price for insurance must be based on a prediction.

The process of predicting future losses and expenses and allocating these costs among the various classes of insurance is called rate making (Rejda, 2001).

A second important difference between the pricing of insurance and pricing in other industries arises from the fact that insurance rates are subject to government regulations.

This is because insurance is considered to be vested in the public interest. Virtually most insurance regulators of various countries enact laws imposing statutory restraints on insurance rates.

These laws require that insurance rates must not be excessive, must be adequate, and may not be unfairly discriminatory.

1.1.2 Types Of Rates

There are two types of rates as classified by Vaughan (1999) and Rejda (2001) namely:-

i) Class Rates

The term class rating refers to the practice of computing a price per unit of insurance that applies to all applicants possessing a given set of characteristic. For example, a class rate might apply to all types of dwellings of a given kind of construction in a specific city. Rates that apply to all individuals of a given age and sex are also examples of class rates.

It has the advantage of permitting the insurer to apply a single rate to a large number of insureds, simplifying the process of determining their premiums.

ii) Individual rates

This applies where the characteristics of the units to be insured vary so widely that it is deemed desirable to depart from the class approach and calculate rates on a basis that attempts to measure more precisely the loss-producing characteristics of the individual.

In deciding these rates, four approaches are mainly employed. These include judgment rating, schedule rating, experience rating and retrospective rating.

Judgement rating is used where stable statistics are lacking or when the exposure units are so varied that it is impossible to construct a class.

Schedule rating makes rates by applying a schedule of charges and credits to some base rate to determine the appropriate rate for individual exposure limit. In commercial fire insurance the rates for many buildings are determined by adding debits and subtracting credits from a base rate which presents a standard building. The debits and credits represent those features of the particular building construction, occupancy, fire protection and neighborhood that deviate from this standard.

Experience rating is where the insured's own past loss experience enters into the determination of the final premium. It is superimposed on a class-rating system and adjusts the insureds premium upward or downward, depending on the extent to which his or her experience has deviated from the average experience of the class.

Retrospective rating is a self-rated program under which the actual losses during the policy period determine the final premium for coverage subject to a maximum or minimum. A deposit premium is charged at the inception of the policy and then adjusted after the policy period has expired to reflect actual losses incurred.

Development of Fire Insurance

After the Great Fire in 1666 that devastated one third of London reducing to ruins over 13,000 houses and 89 churches (including St.Paul's) it was realised that there was a need for the provision of compensation (Hansell, 1974). At the time the only form this took was a collection at the local church. There are various views on when a fire insurance company started, from as early as 1667, but it is generally accepted that Dr. Nicholas Barbon, M.D., son of the eccentric member of Cromwell's Parliament, *Praise-God Barebones*, was the first to promote a serious form of insurance protection in the name of The Fire Office, later to be known as The Phoenix which commenced underwriting fire insurance in 1680 and ceased about 1712 (Carr, 1967). However, policies exist and their emblem is that of a Phoenix rising from the flames.

Some early documents provide evidence of the existence of fire insurance in 1667 in Britain. The Industrial Revolution brought about the growth of fire insurance as many new factories were built and volumes of goods processed within these factories, transported to warehouses and shipped overseas. The mushrooming of industrial activity brought a growth in the demand for fire protection.

In Kenya however insurance is relatively new. As a matter of fact modern insurance is less than 100 years old in most developing countries.

Insurance services have been provided in Kenya since early 20th century though the risks were few. The overseas companies mainly British established local operations in Kenya by setting up overseas branches as opposed to locally incorporated offices. At independence Kenya had no local insurance industry of its own which could provide risk protection capacity for its economy though the situation changed when the overseas branches were converted into fully fledged locally incorporated companies. The government cognizant of the need to accelerate expansion of the local insurance capacity set up two institutions

(namely Kenya National Assurance and the present Kenya Re.) The process of promoting the local insurance industry gathered momentum in the 1980s with the enactment of the Insurance Act Cap 487. This required all insurance companies operating in Kenya to be locally incorporated and to abide by a set of statutory stipulations on a wide range of issues e.g. ownership, share capital, management, solvency and underwriting standards. The Kenyan insurance industry is grappling with internal challenges occasioned by the economic depression and declining premium rates though it is the pre-eminent market in the East African region.

1.1.4 Risks covered under fire policy

Insurance policies provide cover in the event of loss or damage to buildings and contents caused by any of the following perils:-

Fire, lightning, explosion, earthquake, storm, flood, collision, impact, riot, theft, malicious acts, subsidence and ground heaves. These perils are discussed below.

Fire peril

Within the standard policy wording there is no definition of the word 'fire' and the term is to be construed in its popular sense. In order to constitute fire within the meaning of the policy three conditions must be fulfilled: There must be actual ignition: there must be something on fire which ought not to be on fire; the fire must be accidental or fortuitous in its origin as far as the insured is concerned. It must not be willful or intentional on the part of the insured or caused by the negligence of the insured and will not prevent the insured recovering under the policy.

Where these conditions are fulfilled and there is damage by fire, any damage caused proximately by that fire will be damage by fire whether by the fire itself or by the heat and smoke generated.

Lightning

When property is struck by lightning sometimes a fire results but where lightning is unaccompanied by ignition there is no fire damage in the ordinary sense. The standard fire cover specifically includes damage by lightning.

Explosion

Explosion damage needs to be looked at quite closely. Certain types of explosion are expressly covered as is also fire caused by explosion, the object being to exclude only the concussion (or non-fire) damage caused by an explosion outside the situations provided for in the wording.

The situations that can arise are: destruction or damage caused by explosion no fire occurring is covered except in the case of boilers or of gas used for domestic purposes; and provided that the explosion is not caused by any excluded peril. Destruction or damage due to a fire caused by an explosion is covered; provided the explosion is not due to an excluded peril. Destruction or damage due to an explosion caused by a fire; the initial fire damage is covered but not the subsequent explosion damage.

Special Perils

The special perils for which cover is normally provided may be grouped under broad headings namely perils of a chemical type which include explosion, spontaneous fermentation or heating.

Social perils namely, riot, civil commotion, strikers, locked – out workers, persons taking part in labour disturbances and malicious persons.

Perils of nature: storm, flood, earthquake, subterranean fire, subsidence, ground heave and landslide and miscellaneous perils which include escape of water, aircraft and impact.

Explosion has been mentioned in connection with the standard fire cover and we will now look at the additional cover provided by the explosion peril.

Explosion cover therefore does not include explosion of the insured's own steam pressure vessels. The exclusion refers to a boiler economizer or other vessels, machine or apparatus in which internal pressure is due to steam pressure only. The expression 'steam pressure vessels' is used for simplicity. If any such vessel is under a combination of steam and other pressure the exclusion will not apply.

Fuel gas explosion

The standard fire peril policy covers all fire damage before or after an explosion, that is, all ignition damage but not concussion damage by explosion of domestic boilers and domestic gas. The explosion peril covers concussion damage by explosion, not domestic, of any kind but not damage by explosion of steam vessels.

Aircraft

Aircraft is not defined in the policy and the commonly accepted use of the word applies. Before 1957 the cover given was destruction or damage by aircraft or articles dropped there from. The cover indemnified the insured against material loss caused by the crashing of an aircraft or part of an aircraft on to the property insured. The standard fire policy covers fire whether proximately caused by an aircraft crash or not, and therefore the aircraft extension is concerned solely with damage other than by fire.

Other aerial devices

At this time the considerably advances in space research led to requests for cover against damage by guided missiles and rockets and insurers introduced the phrase 'other aerial devices' into the wording. With the advances since then the phrase would now embrace spacecraft or falling debris from spent satellites. It does not however include the results of damage by meteors should they ever fall on an industrial building.

Riot

Riot has been legally defined but the full wording of this peril refers to: riot civil commotion strikers locked-out workers or persons taking part in labour disturbances or malicious persons acting on behalf of or in connection with any political organization and this brings in other instances of persons acting together in an organized way.

Riot damage had been excluded from fire insurance policies but all the law on the subject was reviewed in the case of *Field v. Metropolitan Police Receiver* (1907). For a situation to be classified as a riot five elements had to be shown which are that, there must be at least three people present; there must be a common purpose, lawful or unlawful; there must be execution or inception of the common purpose; they must intend mutually to assist one another by force if necessary in the execution of the common purpose; there must be force or violence displayed in such a manner as to alarm at least one person of reasonable firmness and courage.

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Malicious damage

Malicious damage cover is only available as an extension of riot cover. The wording of the peril is: "Riot civil commotion strikers locked-out workers or persons taking part in labour disturbances or malicious persons".

The essential difference is to extend the 'political' malicious damage to all malicious damage, remembering that fires caused maliciously are not excluded from the standard fire cover. All forms of damage undertaken with intent are regarded as malicious damage.

Riot fire only

If cover is restricted to fire damage only caused by riot or civil commotion then a lower rate applies. As explained above in connection with the Public Order Act 1986, the cover under this peril is less than previously outlined but the standard fire cover is correspondingly wider.

Earthquake, earthquake fire, earthquake shock

In Great Britain there has been relatively little damage to property by earthquake compared to other parts of the world and the cover is generally written without any specific regard to the geographical location or construction of the premises to be insured, however for Kenya geographical location is important when underwriting due to probability of earthquake occurring.

Subterranean Fire

There is a close family link between earthquake and subterranean fire and it will be noted that both are specifically excluded from the cover provided by the standard fire cover. Where cover for subterranean fire is requested, investigation is needed concerning the reason for the request. It may just be to fulfil the

insurance requirements of a lease but insurers are now often faced with subterranean fires burning beneath premises which have been constructed on made-up ground or above coal seams. In such circumstances the heat and fumes may well force the occupiers to vacate the premises but this would not constitute damage as defined in the policy and no claim would be admissible.

Spontaneous fermentation or heating

Again this also appears as an exclusion under the standard fire cover in respect of property which itself spontaneously heats.

Requests will be made only for property which itself is subject to spontaneous heating and therefore the hazards must be considered. If the request involves coal, coke or wood blocks, the risk is usually quite acceptable but for any types of grain, grasses, hay etc. details will be required on the methods of storage and inspections.

Storm

The word storm is used in its everyday sense and denotes some form of atmospheric disturbance such as wind, rain or snowstorm. All buildings are subject to the differences of weather but if properly designed, constructed and maintained will not suffer damage by normal weather conditions. It is the abnormal conditions where the word storm is appropriate.

Flood

Flood involves water rising to an abnormally high level. This may be caused in many ways but storm is also often a feature, for example; high tides in conjunction with high winds may cause the seas to come over sea defenses and flood the land behind; the overflowing of the banks of a lake may be caused by

exceptionally heavy rainfall or by debris blocking up a waterway. In each case the events may have been caused by a storm; bursting of a sewer water mains or overflowing of sewers is often caused by the 'backing-up' of surface water drainage systems which itself has been caused by debris from a storm.

Impact

Impact damage was also amended by the 1989 revisions as it was not felt that the wording really met insured's needs. Previously the wording had related only to the insured and their employees but in many instances the company occupying the premises was not the owner and therefore claims for damage by a tenant were valid. Claims mainly involve walls, gates and fences around the property, which are damaged when a company's vehicles enter or leave the premises.

It was not the insurers' intention to make good damage caused by poor driving. Where requested, own impact cover is available but subject to an excess in respect of each and every loss.

Accidental escape of water from any automatic sprinkler installation

This is generally referred to as 'sprinkler leakage'. Examples of the type of damage that may occur are: a sprinkler head damaged by impact by an article on an overhead conveyor. Heat from some source other than fire as understood by a fire policy causing a sprinkler head to operate; a portable heating appliance, portable plant involving the application of heat, excessive heat from a boiler, a mechanical defect in the installation of which the insured was unaware; freezing of water during frosty weather followed by the bursting of the pipes provided there is no negligence on the part of the insured.

The rating process requires firstly the insurer to predict the claims and then allocate these anticipated costs among the various classes of policyholders.

Secondly, the insurer computes a loading to cover the expenses of operations.

Thirdly, the insurer allocates discounts and penalties for the various features of the building construction, occupancy, fire protection and neighborhood that deviate from this standard.

When a risk is offered to an insurance company someone on behalf of the insurer assesses the risk of loss being proposed to decide whether it is acceptable or not, and to decide on the rate of premium to be charged and the terms and conditions to be imposed.

1.1.6 Factors to Consider in Fire Rating.

In his papers Hure (1982) said risk analysis is always very tricky because a number of factors must be integrated as each one of them has a different effect on the rate of occurrence and the size of loss. Such factors are technological, human or technical.

When assessing risks for a plant the underwriter must take the nature of the industry into account (chemical, office, institutional) as well as the construction and layout, quality of safety devices and conformity to the risk, quality of maintenance and operators qualification. The underwriter must also take into account external factors related to geographical or climatic conditions (Floods, probability of earthquake)

In his paper Innovative Underwriting delivered as 3rd Ian Postgate (Lloyds London 1982) had this to say: -

"The underwriter is in the track of writing ventures and so making money for the company and shareholders. A good underwriter is one that will make a profit. Underwriting risk in the insurance profession means determining the extent of coverage, deductible and sundry limits, rates and probable maximum loss. To enable finance commitment underwriters are in competition and trade as individuals in a market place, therefore each will best serve that market place by writing as much profitable business as possible. The underwriter must determine the maximum amount a client is prepared to pay and perhaps most difficult of all evaluate how to vary the proportion of the risk accepted. Underwriters are risk takers and the moment risk taking is ignored or forgotten underwriting ceases. For the underwriter to survive he needs to be innovative or adapt to change. Another aspect of the underwriter's role is to judge the quality of a risk and to determine rates. In doing so, he commits his company financially. The underwriting level of a risk is determined by the financial loss that the insurance can withstand in case of a claim. Therefore in establishing the amount of participation in a risk the underwriter must be in a position to evaluate the probable maximum loss represented by the risk. "

Physical hazards relates to the tangible aspects of the risk which are likely to influence the occurrence of loss. The physical aspects information is disclosed by the proposer, an inspection of the risk or through the underwriter's experience over the years.

Moral hazard on the other hand is concerned with the attitudes and conducts of the people i.e. the conduct of the insured.

Rate making is the process of establishing a premium rate for a particular class of insurance. The rate is the price of a unit of insurance for one year. The premium, say for a particular building, is arrived at by multiplying the sum insured i.e. amount of insurance coverage by the premium rate.

Adequate rating is essential if profitable business is to be written. In a competitive market the price of insurance like that of other services is to a large extent fixed by forces of demand and supply. With too many operators on the supply side, there is a danger the price might not be right. The fire peril deservedly receives a lot of attention from underwriters as fire has the greatest potential to inflict total loss.

When evaluating potential fire losses underwriters evaluate the construction class, occupancy type, level of fire protection, degree and type of external exposures, loss experience, competition and probable period of interruption for loss of profits policy, probable maximum loss and other causes of loss.

i) Construction class

Construction classes are intended to divide structure into categories with differing resistance to fire. Historically, this has been achieved by categorizing buildings according to the combustibility of their materials of construction. In the insurance industry construction class is the first and forefront consideration for most commercial properties because it is the most static and tangible of the very measurable factors and is the least likely to change.

In the Kenyan insurance industry according to the Association of Kenya Insurers AKI Resolution 07/2000 (Fire Rates and Guidelines), the classification of construction has been grouped as follows:

Class 1: Having external walls constructed entirely of burnt bricks, coral or concrete with hard roof.

Class 2: Having external walls constructed entirely of sun dried bricks or iron or asbestos or metal frames or woodwork slabs rendered on both sides with cement, concrete or plaster and having any frame work partly of bricks, stone, coral or concrete with hard roof.

Class 3: Having external walls constructed wholly or partly of timber, iron or asbestos on timber frame, wattle, woodwork slabs, makuti, with hard roof.

ii) Occupancy Type

The main use or occupancy of a structure represented by its 'occupancy type' also significantly influences the level of the risk within a property. For various buildings, differences occur in the activities taking place, type of materials used and stored, quantity of storage needed, number of occupants present and the equipment and building services required to fulfil the function of a property. All these attributes of an occupancy type do introduce fire hazards and may increase the necessity for additional fire protection measures in commercial buildings. The common hazards associated with occupancy include: housekeeping, heating equipment, electrical equipment and smoking materials. The type of occupancies looked into include office, institutional, commercial service and manufacturing.

iii) Level of Protection

In this context, the 'level of protection' refers to the degree of fire protection provided by active fire-protection systems and services both on a property and provided by the community in which the property is located. In assigning protection factors, the prudent underwriters assess both public protection such as municipal fire department capabilities, fire hydrant distribution and available water supply and also 'private protection', such as fire extinguishers, automatic sprinklers and fire alarm systems provided inside a building. The levels of reliability of these and other fire protection systems and services do significantly affect the overall level of fire protection provided to a structure as well as the premium rate charged.

iv) Degree and Type of External Exposure

Fire protection of commercial and industrial buildings is exposed to risk of fire from beyond the boundaries of a given property. An underwriter should also look into these external factors as they reflect additional hazards introduced by communicating, adjoining or surrounding properties.

1.1.7 Contemporary Issues in Fire Rating

To try and address the problem of the fire rating, the following are among actions taken by interested parties on the issue:-

- Members of Association of Kenya Insurers (AKI) passed Resolution 07/2000 which provided that:-
- Premium rates appearing as Appendix 1 of this resolution as the minimum that will apply to all risks with sums insured exceeding Kshs.150 million (which for the purposes of this Resolution will be referred to as('Listed Risks') in respect of Fire and Perils/IAR and Loss of Profits cover thereof, the threshold will apply to the material damage part of the cover and that for fire risk with minimum sums insured of Kshs.750m – Co-insurers will hold meetings in advance of renewal to consult and agree upon a common approach (AKI Resolution 07/2000).
- Any defaulters to be referred to the Ethics Committee for appropriate action.
- Nine underwriters formed the G12 Club in year 2001 whose objective was to compliment AKI's efforts in uplifting standards and to ensure that economic rates are charged hence bringing some sanity on the general insurance side of business (G12 Club, 2001).

- The Commissioner of Insurance requires all insurance companies to file minimum rates that they expect to charge within a given period when applying for license. The Commissioner's office has also come up with recommended fire rates for market risks. These are risks whose sums insured are over Kshs.150 million.
- The Commissioner of Monopolies received complaints from consumers of the service, that a cartel was being formed by AKI members and a memorandum of understanding was signed by all stakeholders (Ministry of Finance Ref. CONF/MPC/RTP/1194).

1.2 Statement of the Problem

In the local insurance industry, the rating debate has been raging on for a long time with some stakeholders arguing that most underwriters are extortionists fleecing the insured of their hard earned money by way of premium with no intention of indemnifying them in the event of eventualities (Mwangi, 2002)

The underwriters on the other hand have argued that premium rates charged are way below the technically feasible rates to even justify a break-even point.

The problem of rating in the local insurance industry has also been compounded by among others the following factors: -

- Moral hazards that make underwriting business prone to both padded and fraudulent claims hence becoming extremely unprofitable.
- Claims incurred in general business have to be factored in rating. In the last three years this has been estimated to be over Kshs seven billion (Commissioner of Insurance 2002).

- Regulators namely the Commissioner of Insurance and Association of Kenya Insurers (AKI), recommends that only rates filed with them to be charged to clients for listed risks.
- Outstanding premium of over Kshs. five billion in the last three years (Commissioner of Insurance, 2002) which is about 50% of written premium has also affected the rating as unrecoverable debt has to be factored in.
- There is oversupply of the insurance service in the local industry with gross annual premium of Kshs 18.6 and Kshs 7 billion for general and long term insurance business respectively (Commissioner of Insurance, 2002). This has resulted to a price war as insurance companies are undercutting competitors rates.
- In an effort to salvage the price war which has resulted in uneconomical rating of risks the government through the Commissioner of Insurance and the Association of Kenya Insurers formed a working committee to rate market risks and recommend minimum rates for these risks.

Researchers have concentrated on other areas of insurance, however, the only study of underwriting practices in Kenya that is known is, Motor Vehicle Thefts; implications on the underwriting practice in Kenya, (Jaleha,1993). Very little is known about fire rating in Kenya.

This study therefore tries to identify the factors that affect fire rating and the practices adopted in fire underwriting in the Kenyan market.

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1.3 Objectives of the study

The objectives of this study were:

- To identify factors affecting fire rating in Kenya.
- To explore the practices adopted by insurance companies to cope with increasing pressures to manage price war and charge reasonable and sustainable fire rates.

1.4 Significance of the study

Fire insurance contributes the largest non-compulsory class of general insurance business in Kenya, with gross premium of Ksh.3.5 billion out of a total premium of Kshs. 18.6 billion, or 19% of the total premium (Commissioner's report 2002).

Fire insurance seeks to make good the economic loss the individual sustains as a result of fire. These economic losses of wealth to the community are referred to as fire waste. The fire waste comes as a result of physical hazard (risk resulting from construction occupation and situation of property) and moral hazard (risk indicated to the human factor). Insurers by their system of rating tend to eradicate causes of fires and to reduce the scope of fires. The rate is loaded for bad features and reduced where the risk is lessened by such factors as fire-resisting construction or the provision of adequate fire extinguishing appliances.

Insurance companies will use the findings of this study to identify the major rating factors which will help them determine the optimum rate that is acceptable to forces of supply and demand. The optimal rate should be able to absorb a unit of claim, overhead and profit margin. The Commissioner of Insurance and Association of Kenya Insurers (AKI), will also attempt to provide rating policy guidelines.

Lastly, other scholars and researchers who might have an interest in developing the findings further will also benefit from the study and it will act as a source of reference in future.

2.1 Introduction

Risk is at the center of insurance and life itself. There is widespread interest in risk and some definitions given are: Risk is the chance of loss, risk is the possibility of an unfortunate occurrence, risk is the uncertainty as to the occurrence of an economic loss, risk is a combination of hazards, risk is unpredictability, risk is a condition in which there is a possibility of an adverse deviation from a desired outcome that is expected or hoped for. (Vaughan 1999, Mutenga 2003, Rejda 2001)

Insurance is a means to share or transfer the risk of loss. As such it improves an individual's level of protection from incurring financial loss.

Throughout history, protecting commercial structures from fire has been important as fire poses risk in terms of safety to occupants, building integrity, business interruption and the economic health of an economy. Consequently, reduction in the risk of fire for commercial buildings has been a significant goal for society, achieved through a better understanding of all the factors that contribute to fire risks.

Fire risk is defined as "...an estimation of expected fire loss that combines potential for harm in various scenarios that can occur with the probabilities of occurrence of those scenarios." In the past, those affected by fire had little choice but to manage their risk by assuming it themselves. One example where this occurred was the Great Fire of London, England in 1666. As a result of this fire a method of sharing the losses arising from fire among a large group of investors was developed in order to protect owners and businesses against the financial consequences of such a disaster.

There is no single definition of risk. Economists, behavioral scientists, risk theorists, statisticians and actuaries each have their own concept of risk. However risk traditionally has been defined in terms of uncertainty. Based on this concept risk is defined here as uncertainty concerning the occurrence of a loss(Rejda 2001).

2.2 The Role of Insurance

The insurance industry has an important role in the economic and social development of any country, among the roles as stated by Kibera (1996) include;

Risk Transfer

One of the primary functions of fire insurance is to act as a risk transfer mechanism.

We can see this by considering two examples of an individual and the industrial buyer. Think of a car owner who has taken a loan or saved Kshs 10 million to buy a car. The car could be stolen, damaged or catch fire. How will the car owner cope with the loss and financial consequences.

The owner of the car can transfer the financial consequences of the risk to the insurer in return for paying a premium. The same could be said of an industrial set-up where a fire disaster could mean death of an industry.

Creation of the Common Pool.

In the early days of marine insurance, the various merchants who were having goods carried on a ship would agree to make contributions to those who may have suffered a loss during the voyage, after the loss had taken place.

It would be very difficult for any single person to set aside funds to compensate him in a time of loss. The pooling of funds by personal insurance holders enable members to reduce the premium burden paid by each member.

Peace of Mind and Business continuity

Insurance provides a means of reducing risk for any investor hence a peace of mind. Buying fire insurance allows the entrepreneur to transfer at least some of the risks of being in business.

Losses arising from fires, thefts or serious injuries would be impossible for investors to bear without insurance. Because of the effects of the common pool, the business is able to purchase insurance at a premium to cover its risks, this is less than the fund that the company itself would have to retain, even assuming it could retain anything in the first place.

Due to the security required by business associates, some forms of insurance are compulsory by law and others are required to be in force under the terms of contracts e.g. in construction, performance bonds and contractors all risks are a necessity to undertake an assignment.

Loss Control

Insurers have an interest in reducing the frequency and severity of losses not only to enhance their own profitability but also to contribute to the general reduction in the economic waste which follows from insurance losses like fire, storms etc

This is done by insurance companies employing specialist surveyors in fire, security, liability and other types of risks.

The surveyor should be consulted at the planning stage to assess the extent of risk to which the insurance company is exposed and also give advise on how to minimize risk and control loss.

Social Benefits

Fire insurance contributes to the industry by providing jobs directly and indirectly to thousands of citizens hence contributing to the national economy. The industry also provides risk transfer mechanism, peace of mind, loss control among other social benefits.

Investment of Funds

Insurance is based on the principle of pooling funds together from many people and to redeem a loss of a fund member.

To be able to compensate a fund member, the funds pooled together have to be invested for the growth of the fund.

Pooled funds through insurance will be invested in treasury bills, bonds or fixed deposits. A part from the insurance company gaining income, the funds will be available to investors and the government for investments and projects.

Such investments and projects will create employment apart from alleviating the level of poverty.

Providing Shelter

Most of the funds pooled from insurance are invested in real estate. Insurance companies therefore provide this basic requirement for thousands of citizens and hence complimenting the governments' efforts in this area.

Welfare Benefits of Pension Management

Insurance industry plays a vital role of providing the professional expertise to manage and administer pension funds. Policyholders of insurance who may also be pension fund members benefit from the service during old age and when disabled.

Education

Some insurance companies dealing with either general or life insurance sponsor needy students through donations and even sponsor their own staff for professional courses both locally and overseas.

2.3 Fire and Special Perils Policy Wording

Since 1923 most insurance companies used a standard form of policy for home fire business. From the 1970s many insurance brokers began requesting standard policy wordings. The standardization was aimed for consistency within all the wording both as regards terminology and presentation. (Durrant 1991)

The policy wording starts by setting out the terms of the contract. There must be a consideration i.e. payment of a premium by the insured to the insurer. The indemnity provided by the policy is subject to all aspects of the policy being observed and it must be appreciated how the terms, definition, exclusions, provisions and conditions restrict or modify the cover.

When drafting a policy it is important to ensure that all the property to be insured can be clearly identified and that the insured is aware of the need to check all the wordings to avoid any items being omitted. The policy shows what must happen and how in order for it to operate. Most policies are issued on annual basis with subsequent renewals.

Whilst insurers have the option to reinstate the damaged property in case of a claim, this is rarely exercised as difficulties can occur if they are unable to complete the reinstatement. It is simpler to make cash payment and allow the insured to reinstate or replace to his satisfaction. However, the option can be used if there is a suspicion of fraud or arson.

There is need to show the extent of the insurer's liability although the sum insured is shown in the schedule or itemized in the specification. The policy also talks of reinstatement of the sum insured i.e. it is understood that once a claim has been paid, part of the sum insured is 'used up' and the sum insured for the remainder of the period of insurance is reduced by the amount of the claim. There is mention that the insurer may agree to reinstate the sum insured and this is generally arranged by calculating an additional premium based on the amount of the claim payment from the date of loss for the period up to the next renewal date.

A Fire policy comprises many parts and they all contribute to the make up of the whole contract. These can be summarized as: the perils covered, general exclusions, general provisions, general conditions and claims conditions.

An example of an operative clause of a standard fire policy would read as follows:-

" The Insurer agrees ...that if after payment of the first premium and subject to the terms, definition, exclusions, provisions and conditions of this policy.... any of the property insured described in the schedule be lost, destroyed or damaged by any of the perils specified in the schedule during the period of insurance (or any subsequent period for which the insurer accepts a renewal premium) the insurer will pay to the insured the value of the property at the time of its loss or destruction or the amount of the damage or at the insurer's option reinstate or replace such property or any part of it provided that the liability of the Insurer under this policy shall not exceed:-

In the whole the total sum insured or in respect of any item its sum insured at the time of the loss, destruction or damage.

The sum insured remaining after deduction for any other loss, destruction or damage occurring during the same period of insurance, unless the insurer shall have agreed to reinstate any such sum insured.....

This policy incorporates the schedule, specification and endorsements, which shall be read together as one contract. Words and expressions to which specific meaning is given in any part of this policy shall have the same meaning wherever they appear.”

The policy also defines what the word “Damage” in capital means. It means loss or destruction of or damage to the property insured. The policy also sets out the perils covered and the same are allocated a letter and they are self-contained. There are three (3) main perils i.e. Fire, Lightning and Explosion.

The policy also covers special perils, which can be classified as; Perils of a chemical nature e.g. explosion, spontaneous fermentation or heating. Social perils e.g. riot, civil commotion, strikes etc., Perils of nature e.g. storm, flood, earthquake etc., Miscellaneous perils e.g. escape of water, aircraft and impact.

The fire policy has exclusions e.g. war, ionizing radiation, pollution or contamination and marine policies. The policy is also subject to certain general provisions e.g. condition of average and contracting parties interest (applicable to buildings only) and general conditions e.g. policy avoidable, alteration, warranties and reasonable precautions. The policy will also normally contain conditions relating to claims, which include among others action by the insured, fraud, reinstatement, insurer's rights, contribution and average, subrogation and arbitration.

The policy is also subject to a number of endorsements and/or clauses that either extend or limit cover depending on a particular insured's requirement.

2.4 Principles of Insurance

Insurance is a risk transfer mechanism and is therefore a response to risk. To understand insurance, it is necessary to understand the basic principles upon which insurance is based.

These principles of insurance which are also applicable to fire insurance include: insurable interest, utmost good faith, proximate cause, indemnity, subrogation and contribution

Insurable Interest

Insurable interest is the legal right to insure arising out of a financial relationship recognized at law, between the insured and the subject matter of insurance.

The subject matter of insurance contract was defined in the legal case of *Castellain vs. Preston* (1883) where it was said, "What is it that is insured in a fire policy? Not the bricks and materials used in building the home but the interest of the insured property as the insured may be prejudiced by the loss of the property."

Insurable interest was originally conceived to distinguish between insurance and wagers. The rules of insurable interest are more suitable to determine who is entitled to claim on a contract of insurance and what the extent of the claim is. It was decided in *Sadlers Co V Badcock* for insurance purposes an insurable interest must exist both upon the conclusion of the contract and at the moment upon which the event insured against occurs. (M.F.B. Reinecke and S.W.S Van der Merwe (1989)

Utmost Good Faith

Insurance business is subjected to the doctrine of utmost good faith or *uberrimae fidei*. This is the duty of disclosure which rests on the proposer and

exists during inception and until the contract is concluded and then revived at renewal. The proposer is required to disclose all the material facts. The duty to disclose in insurance is voluntary and was first explained by Lord Manfield in *Cater V Boehm* (1766) where he observed "Insurance is a contract upon speculation, the special facts upon which the contingent chance is to be computed lie more commonly in the knowledge of the insured only. The underwriter trusts to his representations and proceeds upon confidence that he does not keep any circumstances in his knowledge to mislead the underwriter into a belief that the circumstance did not exist".

In the words of Kennedy L. J in *London General Omnibus V Holloway* (1912) "the party seeking to insure may fairly be presumed to know all the circumstances which materially affect the risk". These are: facts relating to and description of the subject matter, previous losses/claims, facts which would make the loss greater than normal, restrictions imposed and existence of other policies.

On the other hand the insurer is required to know facts which are not disclosed such as: facts of law, facts revealed by survey reports e.g. visible features, facts of common knowledge e.g. flood areas, and facts and records stated in the proposal form.

The Doctrine of Proximate Cause.

As was decided in *Pawsey V Scottish Union & National Insurance Co.* (1958) proximate cause means the active efficient cause that sets in motion a chain of events which brings about a result, without the intervention of any force started and working actively from a new and independent source. It is the cause which is the more direct, dominant, operative and efficient in giving rise to the event. In *Yorkshire Dale Steamship Co V Minister for Water & Transport* Lord Wright states each case must be judged in the light of its own facts and by resorting not to the refreshment of the philosophical doctrine of causation but to the

common place tests which the ordinary businessman establishes the criteria for policy liability between peril and damage. Another role arises in circumstances where the causes operate closely together and closely to the resulting damage. Under these circumstances the doctrine studies the causes for the purpose of selecting one of them as the proximate cause.

This thinking is embodied in the Marine Insurance Act 1906 sec. 55.1. The insurer is liable for any loss proximately caused by a peril insured against, but subject as aforesaid, he is not liable for any loss which is not proximately caused by a peril insured against.

The Principle of Indemnity

This principle means that there should be no more and no less than restitio in integrum. In *Castellain V Preston* (1983) Prett W J observed that the contract of insurance contained in a marine or fire policy is a contract of indemnity and that this contract means that the assured in case of loss against which the policy has been made shall be fully indemnified but shall never be more than fully indemnified. Indemnity requires that the insured shall be placed in the same financial position after the loss as he occupied immediately before the loss. Indemnity is limited to the insured's interest in the insured property (position).

Indemnity is provided in the following ways: -

Cash- property claims are paid in cash.

Repair- repair to buildings are also carried to indemnify the insured.

Replacement- this is required when buildings/windows are broken.

Reinstatement- rarely used due to future consequences.

It is important to note that it is the value and not cost of the building which determines indemnity in property insurance. For example: buildings- indemnity is provided generally by repair less betterment and for stocks, replacement cost is the normal measure.

The maximum payment is obviously the sum insured or the limit of indemnity. It is a norm that average applies when the property is under insured and the formula applied is as follows:

$$\text{Loss} = \frac{\text{Sum insured (full value)}}{\text{Sum insured (time of loss)}}$$

Contribution

Contribution is an equitable remedy so that a proportion of a paid claim can be recouped from other insurers who have also received premium for the same risk. Usually the policies state that a policy will only pay its ratable proportion if another policy exists and for contribution to arise, the policies must cover common interest, for a common peril and common subject matter.

All policies must be in force at the time of loss, all policies must be legally binding agreements of insurance and none of the policies must contain a stipulation excluding itself from contribution. The principle is contained in section 80(l) of the Marine Insurance Act which provides that where the insured is over insured by double insurance each insurer is bound as between himself and other insurers to contribute ratably to the loss in proportion to the amount of which he's liable under his own contract. If any insurer pays more than his proportion of the loss he's entitled to maintain an action for contribution against other insurers.

Subrogation

As a principle, subrogation was established in 1882 in UK (Case of Burnald V Rodocanachi). The insurer is allowed to proceed in the name of the insured and avail himself all the insured's rights but the insurer can not recover more than what he pays out. Subrogation arises out of loss, contract, statute and subject matter of insurance.

In the words of Clarins L.J in Simpson V Thomson “where one person has agreed to indemnify another, he’ll on making good the indemnity be entitled to succeed on all the ways and means by which the person indemnified might have protected himself against or reimbursed himself for the loss.” The doctrine has its justification in equity.

2.5 Scope of Fire Insurance

The fire policy which covers buildings, machinery and stocks is used to evidence all contracts of fire insurance. The policy undertakes that on the happenings of certain specified events the insurer will pay to the insured the value of the property at the time of happening of a loss. At its option, the insurer will reinstate, replace, repair or pay cash. The insurer's liability is limited in respect of each item to the sum insured level.

The perils covered under a fire and perils policy are: fire, lightning, explosion of gas used for domestic purposes only and explosion in the building not being part of any gas work used for domestic purpose or need for lighting, and heating the building. The explosion of gas is therefore limited and does not include gas used in any trade process.

Domestic does not mean house. It has been held that a hot water boiler used in a hospital or hotel for providing hot water for kitchen use and warming the room is a boiler used for domestic purposes. Fire implies the actual ignition of something which ought not to be on fire and must be fortuitous or accidental as far as the insured is concerned and fire need not originate in the insured premises. The expected perils are incorporated in the operative clause of the policy. The purpose is to endeavor to place the onus or burden of proof of loss upon the insured.

There are various policy conditions, which should be complied with and dealt with. These are: notification of loss, claims, fraud, reinstatement of insurer's rights, contribution, subrogation, arbitration and warranties.

The special perils term is employed to describe those risks excluded but which the insurers are prepared to cover on certain terms and at additional premium (such perils are storm and tempest, flood, hail, earthquake, subsidence, malicious damage, sprinkler leakage, riot, strike, and civil commotion). These are referred to as perils of chemical nature, (explosion), social perils, perils of nature (flood) and miscellaneous perils (sprinkler leakage).

Fire is normally caused by negligence often due to poor housekeeping. The accumulation of waste can easily be ignited by a welding spark or a carelessly discarded cigarette. The location of the insured property can aggravate the effect of fire in that it may be far from a fire brigade, water course and fire fighting facilities may not be adequate.

2.6 Fire losses in Kenyan vs. American case study

Kenya has suffered very large fire claims. The fire brigades in Kenya are not equipped and trained as in other countries of the world. Practical action taken is often limited to stopping fire from spreading to adjacent premises or properties.

Statistics on fire wastage is not available for Kenya. Detailed information on each of the large fires is required and facts should be analyzed to formulate future strategies of dealing with large fires.

The insurance industry has paid over Kshs. 4 billion in claims in the last ten years relating to fire risk.

As stated earlier fire statistics are required as these can assist underwriters in setting fire premiums for large industrial concerns and factories. The statistics

can also be used as a basis for penalising poor features. (Insurance Institute of Kenya 2000).

Major fires have also occurred in the U.S.A and their corresponding devastating effects in terms of financial losses experienced are as shown on table 1 below.

Table 1: Major fire losses in the USA

Year	Places	Amount of Loss (US \$ Millions)
1990	Santa Barbara	265
1918	Minnesota	304
1835	New York	328
1988	Norco	365
1947	S.S. Grandcamp	392
1942	S.S. Normandie	425
1904	Baltimore	725
1989	Pasadena	790
1872	Boston	815
1991	Oakland	1200
1871	Chicago	1826
1906	San Francisco	5072

Source: Swiss Re Journal, 1992

The figures shown above concern losses which can be expressed in concrete financial terms but do not include personal values and not to mention the far reaching indirect economic losses.

In addition, these are mere figures however, the shock will leave a more lasting effect. The victims the helpers and everyone else who was directly or indirectly affected by the catastrophes agree that fire peril is worse than an earthquake.

Certain causes of losses cut-across major fires that have occurred in the world. They include unsuccessful intervention from fire fighting departments, climatic and weather conditions and the city planning and development structures. The road network is yet a further contributing factor. Swiss Re Journal (1992)

2.7 General insurance business statistics

Gross direct premium income under general insurance business amounted to Kshs.18.7 billion in 2002 against the previous year's Kshs.16.1 billion. The major portfolios of business were from the following classes: Motor Commercial (Kshs.5.1 billion), Motor Private (Kshs.3.0 billion), Personal Accident (Kshs.2.5 billion) and Fire Insurance (Kshs.3.5 billion). Fire insurance class had the highest premium of the non-compulsory classes, with a gross premium of KShs 3.5 billion.

Table 2: Distribution of Gross Direct Premium Incomes per Class (General)

Class of Business	Gross Direct Premium (thousand)				
	1998	1999	2000	2001	2002
Aviation	49,327	47,868	55,841	181,802	220,914
Engineering	499,976	525,525	418,001	546,073	532,180
Fire Domestic	515,806	530,807	532,724	548,433	535,250
Fire Industrial	2,247,704	2,366,081	2,189,680	2,345,985	2,964,870
Liability	206,019	319,226	314,043	311,549	411,520
Marine	829,217	796,339	911,489	940,420	929,270
Motor Private	2,906,523	3,009,853	2,817,362	2,783,671	3,036,180
Motor					
Commercial	4,116,727	4,243,631	3,836,072	3,792,494	5,122,210
Personal Acc.	1,498,884	2,018,257	2,094,331	2,418,013	2,533,990
Theft	941,562	968,735	975,901	1,024,466	1,105,040
W/Compensation	752,922	768,978	771,366	861,529	928,950
Miscellaneous	494,311	458,831	268,239	369,379	355,100
TOTAL	15,058,978	16,054,131	15,185,049	16,123,814	18,675,510

Source: Commissioner of Insurance year 2002, Annual Report

2.8 Regulation (Government Control) - Insurance Act Cap 487 (1987)

The government has a role to protect the consumers by ensuring that companies maintain the required adequate solvency and liquidity levels, hence the need of a regulatory framework.

The Government must foster a regulatory framework that is effective to the needs of shareholders, policy holders and the nation. The continued support of the government is absolutely essential and vital to the growth of our industry, this is because of the immense contribution the industry has made to the social economic development of the country.

In Kenya the insurance industry is regulated by the Insurance Act Cap 487 which has a total of two hundred and three (203) sections.

Section 75 of this Act requires an insurer carrying on general insurance business to file with the Commissioner of Insurance a schedule or manual of rates of premium proposed to be used by the insurer for each class of business, before commencing to carry on that business or before the expiry of three months from the appointed date, whichever is later.

This is not however unique to only Kenya but it is a worldwide practice due to the importance of the industry to all stake holders, governments included.

2.9 Premium Computation Table

As stated elsewhere in this paper, insurance in Kenya was introduced by companies from Europe. Historically, the European companies used fire tariffs. The tariff system set out guidelines and premium structure for main trades and the influence of the guidelines were generally beneficial.

The fire tariff was also introduced in Kenya and was used until 1980s when it gradually became obsolete. It is however important to put it on record that most of the fire underwriters use the tariff these days as a guide. The steps in fire rating are: rate as per fire tariff ,deduct _% for superior construction, deduct _% for FEA/sprinklers ,add _% for poor construction, add _% for spray painting, add _% for special perils (Fire and Allied Perils),add _% for mineral oil warranty, add _% for floating cover ,deduct _% for deductible, deduct _% for Long Term Agreement (L T A) , add 0.25% for earthquake fire risk.

The insurance industry acknowledges the contribution that automatic sprinkler systems can make to the increased fire protection of properties. Significant reductions in premium rate is allowed of up to 50%

2.10 Industrial All Risks Policy (IAR)- Comprehensive Fire Policy

The market practice to arrive at the net rate for this class of business is that the Fire and Allied Perils rate is loaded by between 20 - 35% and it is prudent to impose a deductible for the special perils of say Ksh. 100,000. IAR policies do carry a mandatory deductible of Ksh. 250,000.

2.11 Loss of Profits Policy

The fire policy also covers consequential loss (business interruption). This means loss resulting from interruption, which must be accidental, and caused by an insured peril. The insured perils under a Con Loss policy are similar to those covered under a material damage policy. The Con Loss policy covers the loss of gross profit, salaries and wages and auditors fees.(Munich Re (1990))

For proper house keeping clauses are imposed. The clauses are classified into those that increase liability, those that import liability and those that increase risk.

The Loss of Profits Policy covers loss following damage at the insured's own premises by an insured peril subject to material damage provision, but business organisations could suffer as a result of loss or damage at other locations. If insurable damage at someone else's property can cause interruption to an insured's business, then the insured should be advised on relevant extensions to cover the dependency.

The main extensions to the basic Loss of Profits Policy include: suppliers extension, customers extension, denial to access public utilities, transit motor vehicles and bomb threats.

Rating of this class of business depends on the material damage policy rate on the Fire and Allied Perils or IAR as the case may be and a relevant multiplier in relation to the indemnity period applied as follows:-

Indemnity Period	Multiplier
12 Months	100%
9 Months	90%
6 Months	75%
18 Months	90%
24 Months	75%
36 Months	60%

2.12 Discounts for Deductible

As a market practice, the following may be allowed.

Material Damage	Premium Discount
0.25% of sum insured subject to Ksh. 2M	5%
1 % of sum insured subject to Ksh.8M	10%
3% of sum insured subject to Ksh. 12M	20%

2.13 CHALLENGES FACING INSURANCE COMPANIES IN KENYA

The Kenyan insurance industry has many challenges, among the challenges as stated by Kibera (1996) and Ngaru (1998) include: -

Lack of Proper Fire Statistics

Fire loss statistics are published but one of the weaknesses of currently available fire statistics is that they do not clearly show the reasons why small fires develop into large fires. The wide range of factors aiding fire spread is not statistically analysed.

The analysis of the fire statistics should highlight the features which regularly contribute to an incident developing into a major loss. The results would pinpoint the factors where individual standards of building construction, usage or protection could be upgraded to limit the escalation of individual incident cost. The support of statistics would enable confirmed inclinations to be acted on. The annual publications of results could be supplemented by the issue of software from which users could extract information pertinent to individual requirements.

Lack of Fire Preparedness

Preparedness for hazard of fire i.e. house fires, commercial and industrial fires, is obviously very important given that not only the belongings but the very lives of human are at risk. People who might be exposed to fire need to be optimally informed about the hazard characteristics, preventive measures and appropriate behaviors during the onset of a fire event and must understand their own responsibilities. It is very unfortunate that this is not the case in the local market and where done it is very limited.

Creating Insurance Awareness

At present the general level of insurance awareness is still low. The public should therefore be better educated on the purpose, functions and value of fire insurance through seminars, public enlightenment campaigns and other insurance promotional activities e.g. writing of insurance related articles in newspapers.

Changes in the Insurance Environment

Although modern insurance is new, being less than 100 years, the environment has been subjected to a lot of changes in recent years. The insurance industry today is being challenged by depressed and battered economy, poor liquidity situation amongst the public and increasing competition for businesses within the industry itself resulting in rate cutting.

Reinsurance Challenges

It is a fact that no modern economy can survive without an organized industry. By the same token no modern insurance company can go on and survive without the support of an efficient reinsurance system. On the whole, the Kenyan business has been profitable to the international resources, despite this the reinsurers of late have been imposing stringent and adverse terms and

conditions possibly to make up for losses which they have suffered in other worldwide markets. This is a punitive measure for 'an offence' which the Kenyan fire underwriter has not committed.

Technical Expertise to Underwrite Specialized Classes

To a large extent most of the fire underwriters are self sufficient in the underwriting and administration of simple risks but there is a deficit with regard to specialised risks where underwriters rely on the expertise of their reinsurers in the developed world.

Capacity Problems

Another factor responsible for the ineffectiveness of fire underwriters is utilisation of the local capacity. The companies do not utilise local capacity before ceding business to international markets, primarily because they seem to have little confidence amongst themselves. The companies tend to distrust each other to the extent that they prefer to place business with international markets than with some of their colleagues in the local industry even where the recovery capacity exists.

Competition

There are approximately 40 players within the market making competition very stiff. Competition is also from banks offering insurance services relating to house-owners and house-holders (Domestic Packages) policies.

The competition has brought about price wars, lack of proper underwriting of risks and a high drive to acquire business.

Premium Payment

There is unnecessary delay in the remittance of premiums to the insurers. This affects the underwriters cash flow process. The credit period has however been tackled by the Minister for Finance but has not yet been legislated for implementation.

Insurance Act (statutory bottlenecks)

The Act requires amendments to incorporate a section on prudent underwriting standards to be maintained within the market place and hence stop unethical practices/competition which results in rate cutting and may eventually lead to companies insolvency/bankruptcy.

Outstanding Premiums

Insurance companies are plagued by huge outstanding premiums owed to them by the intermediaries. This is in breach of section 156(2) of the Insurance Act. These outstanding premiums have contributed to serious cash flow problems for several insurers some of which have gone under.

Economic Problems

The Kenyan economy has performed poorly in the recent past experiencing a low GDP. The poor economic growth has affected many Kenyans purchasing power and has also increased crime levels and as a result increased claims which erode company funds.

Claims Payment

Poor claims payments by insurers bring about poor publicity. Some insurers do not pay genuine claims in time and delay payments for claims they have already admitted and issued discharge vouchers.

A New Dimension in Insurable Risk

The September 11th disaster in New York has had a significant worldwide effect on insurance and reinsurance. The markets hardened and the event introduced a new dimension in many regions of the world. Prior to this tragedy disasters of this magnitude were known to fall within natural catastrophes but now the insurance industry worldwide will have to come to grips with the loss implications from man made disasters. This spectre of terrorism is challenging the very concept of insurability since insurance is feasible at certain degrees of predictability. For risk to be insurable the underwriters must satisfy themselves that the following is met randomness, diversification, quantifiability, risk is capable of being priced and it is technically feasible to set terms and conditions to apply commensurate with the risks. The risks of terrorism however do not fulfil these conditions.

There is no way to estimate the frequency and severity of terrorist acts unlike natural catastrophes. The incident brought into focus this new dimension of man made disasters and if cover is to be granted underwriters will have to do fundamental reassessment that takes many factors into consideration as the event 911 threw the world into turmoil.

Corporate Governance

Cadbury (1992) defines corporate governance as the system by which companies are directed and controlled. It also refers to corporate governance as the way in which the affairs of the corporation are handled by corporate boards

and officers. Hampel (1998) observes that good governance ensures that constituents (stake holders) with a relevant interest in the company's business are fully taken into account. Monks (1998) also shares the foregoing views seeing corporate governance as "the relationship among various participants in determining the direction and performance of the companies consistent with the public good " Amos (2002)

Negative Publicity

Kenya is a broker market and most companies depend on this for the acquisition of business. Most of the agents used have little or no understanding of the products they sell. Some of the brokers have no technical expertise of the insurance business. This is what has fanned the negative publicity.

Broker Pressure

The blame on rate cutting should be put on the underwriters' hunger for questionable business and increasing their volumes. It is therefore the underwriters' responsibility to stop his ears to seductive voices and underwrite the risk. The most valuable contribution an underwriter can make to the market and to the insurance industry generally is to say No when they are a seemingly overwhelming clamor for poor business. The broker presenting questionable business is only doing his job as an advocate of the insured but it is the underwriters' job to make a sober and proper judgment of risks on behalf of long-term interest.

3.1 Research Design

This was a census survey.

3.2 The Population

The population consisted of all the 36 insurance companies underwriting fire business in Kenya as at 2003 and licensed by the Commissioner of Insurance to underwrite insurance business (Appendix B).

3.3 Data Collection

Both primary and secondary data was collected. The questionnaire had both open and closed questions and was used to collect both qualitative and quantitative data on rating practices.

Secondary information was obtained from the office of the Commissioner of Insurance and the Association of Kenya Insurers (AKI).

The respondents were underwriting managers in the respective companies and were therefore knowledgeable on the issues under study .

3.4 Data Analysis

The main tool of analysis was the descriptive statistics.

A five point likert scale was used to identify factors affecting fire rating in Kenya and the practices adopted by insurance companies to cope with increasing pressures to manage price war and charge reasonable and sustainable fire rates.

The data from the questionnaires was coded and the Statistical Package for Social Scientists (SPSS) was used in data analysis so as to generate the descriptive statistics which included means, frequencies, standard deviations and percentages for the factors affecting fire rating .

4.1 Response Rate

A total of 36 questionnaires were sent to the insurance companies. Out of the 36 questionnaires, 21 were returned duly completed. The survey therefore achieved a response rate of 58% which was found to be adequate for the purposes of the study.

4.2 Respondents' Biodata

4.2.1 Respondents' Designations

All the respondents were underwriting managers in the respective insurance companies as shown below. All respondents were therefore knowledgeable in the area of study.

4.2.2 Type of Company

80% of the companies which participated in the survey were private limited companies, 5% were public limited companies, 5% were cooperative insurance companies and 10% were reinsurers as shown in table 4 overleaf.

Table 4: Company Ownership

Type of Ownership	Percent
Private limited liability company	80
Public limited liability company	5
Cooperative insurance company	5
Reinsurers	10
Total	100

4.2.3 Year of Establishment

In terms of years of establishment; 29% of the companies sampled were established after 2000, 19% were established between 1991-2000 and between 1981-1990 respectively, 14% were established between 1961-1970 and those established before 1960 were 14% of the total companies surveyed as shown below in table 5 .

Table 5: Year of Establishment

Year	Percent
Before 1960	14
1961-1970	14
1981-1990	19
1991-2000	19
After 2000	29
Non committal	5
Total	100

4.2.4 Types of Business Underwritten

Majority of the companies (52%) in the survey underwrite general business whereas 48% underwrite composite business as shown below in table 6:

Table 6: Types of Business Underwritten

Business	Percent
General	52
Composite	48
Total	100

4.2.5 Number of Employees

In terms of employment, 48% of the companies sampled have below 100 people in their employment, 33% have between 100 – 200 employees, and 14% have over 200 employees whereas 5% did not indicate the number of people in their employment as shown below in table 7.

Table 7: Current Number of Employees

Number of employees	Percent
Below 100	48
Between 100-200	33
Over 200	14
Non committal	5
Total	100

4.2.6 Perils and Fire Rating

A five point likert scale was used to measure the extent to which the various perils affect fire rating. Respondents were required to indicate their agreement

with the various statements on a scale of 1 to 5 where 1=strongly disagree,2=Disagree,3=Neither agree nor disagree,4=Agree,5=Strongly agree.

Mean which is a measure of central tendency has been used to analyse the response to the likert scale. From the analysis in table 8 below, perils with higher mean scores of 4 and above affect rating of fire to a very large extent and perils with mean scores of less than 3 do not affect fire rating to a large extent .

The perils with mean scores of 4 and above are: explosion, earthquake, storm and flood, collision and impact, riot and strike, subsidence and ground heave and malicious act peril. Theft acts peril had a lower mean score of 2 compared to the other perils .This means that it does not affect fire rating to a large extent.

Table 8: Perils that Affect Fire Rating

	Mean	Std. Deviation
Explosion perils affects fire rating	4	0.4976
Earth quake peril affect fire rating	5	0.5071
Storm and flood peril affect fire rating	5	0.4976
The possibility of collision and impact peril affects fire rating	4	0.4976
Rating of fire policy is affected by riot and strike peril	4	0.4976
Theft acts perils affects fire rating	2	1.2611
Subsidence and ground heave perils would affect fire rating	4	0.4976
Malicious acts perils affects fire rating	4	0.4976

4.2.7 Other Perils that Affect Fire Rating

Other perils that are not in the standard fire rating policy and affect fire rating are listed in table 9 below.

Table 9: Other Perils that Affect Fire Rating

Peril	Percent
Bush fire peril	14
Aircraft peril	10
Volcanic eruption peril	5
Spontaneous fermentation	5
Subterranean fire	5
Burst pipes	10
Lightning damage	10
Physical and moral hazards and claims	10
Wind/Tempest	5
Threat of terrorism	5
Arson	19

4.3 Other Factors that Affect Fire Rating

A five point likert scale was also used to measure the extent to which other factors are considered during fire rating. Respondents were required to indicate their agreement with the various statements on the factors that affect fire rating on a scale of 1 to 5 where 1=strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly agree. Factors with mean scores of 4 and above can be said to affect fire rating to a large extent, whereas factors with mean scores below 3 affect fire rating to a less extent.

Table 10: Other Factors that Affect Fire Rating

Factor	Mean	Std. Deviation
Construction class affects the rating of fire	5	0.3586
Occupancy affects the rating of fire	5	0.3586
Fire safety precautionary measures affect fire rating	5	0.3586
A history of loss and experience affect rating	4	0.4976
Market competition affects rating	4	0.4976
The probable period of interruption for loss of profits policy affects rating	4	0.4976
The estimated maximum loss affect rating	3	1.0305
Wages basis of settlement i.e. dual or basic affect rating	4	0.4976
Location of building affect rating	4	0.4976
client neighborhood affect rating	4	0.4976
Sum insured and size of risk affect rating	4	0.4976
Treaty terms affect rating	4	0.4976
Overall insured portfolio affects rating	4	0.4976
Brokers pressure affect rating	4	0.4976
Proximity and accessibility of fire brigade and other fire fighting equipment affect rating	4	0.4976
Spread of the risk affect rating	4	0.4976
Deductibles affect rating	4	0.4976
Deletion of electrical ,petrol and mineral oil clauses affect rating	4	0.4976

4.3.1 Additional Factors that Affect Fire Rating

Other factors mentioned by the respondents that affect fire rating include bush fire, aircraft, volcanic eruption, spontaneous fermentation, subterranean fire, burst pipes, lightning damage, physical and moral hazards, wind, threat of terrorism and erosion as indicated in table 11 below

Table 11: Additional Factors that Affect Fire Rating

Factor	Percent
Roofing materials used (e.g. Makuti decorations)	17
Spray painting involved	25
Earthquake	17
Risk improvement recommendation	25
Spread of risk	33
Sum insured	42
Long term agreement	25
Claims experience	17
Escalation	8
Declaration policies	25
Deletion of electrical clause	42

4.4 Rating process

The insurance companies use various methods when rating fire as shown in table 12 overleaf.

The notable thing that is common in most companies is the use of the tariff guide when rating fire.

Table 12: Fire Rating Process

Process description	Percent
Fire tariff is used where basic rates for various occupations are indicated	10
Compare rates of similar risks and look at specific risk in question on its loss history and surveyors recommendations	20
Basic rate for location, occupation and construction ,add charge for each extension cover then allow discount	10
Determine the occupancy, construction, hazard grade, sum insured, loss experience, fire protection, and use tariff guide to determine basic rate and load discount appropriately depending on the requirements	19
Receive request ,if sum insured is below 150m then quote per tariff ,if above 150m then refer to AKI	28
We follow the market practice	14

4.4.1 Standard Rating Format

Majority of the companies (62%) indicated that they had a standard rating format whereas 38% did not have standard rating formats. The standard rating format implies that there exists an agreed procedure that is followed by the company when rating a fire risk.

Table 13: Standard Rating Format

Standard Format	Percent
Yes	62
No	38
Total	100

4.4.2 Discounts given for Semi Superior Construction

Majority of the companies (62%) did not disclose the discount they give for semi superior construction and 19% indicated that they give between 10%-12.5%. 13% said they did not give any discounts for semi superior construction whereas 5% indicated that they give a discount of between 2.5% - 5%.

Table 14: Discounts given for Semi Superior Construction

Discount	Percent
2.5%-5%	5
10%-12.5%	19
None	13
Non committal	62
Total	

4.4.3 Discounts given for Superior Construction

Whereas 9% of the companies indicated that there was no standard discount given for superior construction, 19% disclosed that they give a discount of 10% for superior construction, 15% indicated that they give a discount of 12.5% , 5% give a discount of 7.5% and 9% give a discount of 5%. 43% of the companies did not disclose the discount they give for superior constructions as shown in table 15 overleaf

Table 15: Discounts given for Superior Construction

Discount	Percent
5%	9
7.5%	5
10%	19
12.5%	15
Not standard	9
Non committal	43
Total	100

4.4.4 Presence of Safety Precautions and Fire Fighting Equipment

Majority of the companies (90%), indicated that the presence of safety precautions like sprinklers attract a discount on rating, whereas a few of the companies(10%) indicated that the presence of such safety precautions did not attract any discounts.

Table 16: Presence of Safety Precautions.

Precaution	Percent
Yes	90
No	10
Total	100

Majority of the respondents (67%) indicated that the presence of safety precautions particularly fire fighting equipments minimizes the risk of fire and therefore their presence in a premises attracts discounts during fire rating. However 38% were non-committal as shown in table 17 below.

Table 17: Presence of Fire Fighting Equipment

Explanation	Percent
Presence of fire fighting equipment minimize the risk	67
Non committal	38

4.4.5 Discounts given for various Deductibles.

Out of the 21 companies sampled, 10% indicated that they give a discount of 2.5% for a deductible of 750,000, 12 companies give a discount of between 5%-10% for a deductible of 5m, 10 companies give discounts of between 10%-12.5% for a deductible of 10m, and 10 companies also indicated that they give a discount of 12.5% for a deductible of 15m. Whereas 5 of the companies said they did not give any discounts, 2 companies said that the discounts given was up to 1% of the sum insured.

Table 18: Discounts given for various Deductibles.

Discounts	Frequency
2.5% for deductible of 750,000	10
5%-10% for deductible of 5m	12
10%-12.5% for deductible of 10m	10
12.5% for deductible of 15m	10
Up to 1% of sum insured	2
No discounts are given	5

4.4.6 Reduction given for Long Term Agreement

Reductions given for long term agreements range from 2.5%-7.5% for 3 years agreement, from 5%-15% for 5 years agreement and from 10%-25% for 10 years agreement as shown in table 19 overleaf. Most of the companies in the survey did not indicate the reductions they give for long-term agreements.

Table 19: Reductions for Long Term Agreements

Long Term Agreement	Reduction	Percent
3 years	2.5%-7.5%	48
5 years	5%-15%	52
10 years	10%-25%	48

4.4.7 Loading applied for various Special Perils

Loadings given for special perils are 0.25% -0.375% over and above the fire rate for floods, subsidence, storm ,wind and other special perils as shown in table 20 below.

Table 20: Loading for Special Perils

Peril	loading
Floods	0.25%-0.375
Subsidence	0.25%-0.375
Storm	0.25%-0.375
Wind	0.25%-0.375

4.4.8 Deletion of Mineral Oil Warranty

Majority of the companies (71%) agreed that deletion of mineral oil warranty attracted loading on the rate applicable whereas 10% indicated that the deletion did not attract any loading on the rate applicable and 19% were non-committal.

Table 21: Deletion of Mineral Oil Warranty

Mineral Oil Warranty	Percent
Yes	71
NO	10
Non committal	19
Total	100

The loading applied for deletion for the mineral oil warranty ranges from 2.5% to 5% in 49% of the companies and 10% of the companies give 10%,5% of the companies give 20% and 36% were non committal on the issue as shown below in table 22.

Table 22: Loading for Mineral Oil Warranty

Explanation	Frequency	Percent
2.5% to 5%	10	49
10%	2	10
20%	1	5
Non committal	8	36
Total	21	100

4.4.9 Loading applied for Stock Floater Cover

The loading applied for stock floater over and above fire peril ranges between 10%-20% in 48% of the companies, between 25% to 50% in 24% of the companies and 29% of the companies did not disclose the loading they apply for stock floater cover over and above the fire peril.

Table 23: Loading for Stock Floater Cover

Loading	Percent
Between 10%-20%	48
Between 25% to 50%	24
Non committal	29

4.4.10 Loading for Industrial All Risks Cover (IAR)

Most of the companies (52%) did not indicate the loading they applied for industrial all risks covers whereas 10% indicated they applied a rate of 10%, and 38% said they applied a rate of between 20%-25% as shown in table 24 below.

Table 24: Loading for Industrial All Risks Cover (IAR)

Loading	Percent
10%	10
20%-25%	38
Non committal	52
Total	100

4.4.11 Rates offered for Loss of Profits policy Cover over and above the fire peril.

Most of the companies who responded indicated that the rate charged for loss of profits policy depended on the indemnity period.

4.4.12 Procedures and Format Followed to Rate a Risk

The procedures used in rating a risk differed in the companies sampled. 24% of the companies indicated that they used the basic rate after giving the necessary discounts, 10% indicated that from the underwriter, the underwriting manager confirmed the rates and then the chief underwriter gave approval, whereas in some companies (10%), the marketers provided quotations which were checked by authorized managers before approval was given. 14% indicated that the proposal was first assessed then rated. The most elaborate format followed by 24% of the companies was: using basic rate less superior/semi-superior construction plus malicious damage, plus special perils less volume discounts plus earthquake perils less long term agreements.

Table 25: Procedures and Format Followed to Rate a Risk

Procedure	Percent
Basic rate less discounts as appropriate ,load for bad perils ,allow special rate discounts	24
Underwriter rates, underwriting manager confirms and passes to chief underwriter for approval	10
Marketers provide quotes which are checked by authorized managers	10
Proposal assessment and premium rating	14
No specific format	19
Basic rate less superior /semi superior construction plus construction, plus malicious damage, plus special perils, less volume discounts, plus earthquake less LTA	24

4.4.13 Risks that can not be rated from the office

81% of the companies affirmed that there were market risks that could not be rated from their offices whereas 24% indicated that there were no risks that they could not rate from the office.

Table 26: Risks that cannot be rated from the office

Risks not rated in office	Percent
Yes	81
No	19
Total	100

4.4.14 Action taken for risks that cannot be rated from the office.

Though 24% of the companies did not indicate how they treated such cases 19% indicated they referred such cases to AKI or used the mega listed risks guide from AKI to rate such risks. 10% indicated that such cases were discussed with a technical committee and that they contacted reinsurers when they had cases that could not be rated from their offices. 5% of the companies referred such cases to their regional offices, whereas another 10% indicated that they sought advice from their lead brokers when they had such cases.

Table 27: Action taken for risks that cannot be rated from the office.

Action	Percent
We discuss with the technical committee	10
We contact reinsurers	24
Big risks can not be rated from the office and are referred to AKI or follow the mega listed risks guide from AKI	19
Through industry rating committee by the insurer	10
Big risks with hazardous occupancy is rated in consultation with our regional office in South Africa	5
We seek advise from our lead brokers	10
Non committal	24

4.4.15 : Safety Precautions that must be in place before a Fire Proposal is accepted.

There are certain precautionary measures that must exist before or are taken by the insurer before fire policy proposals are accepted. 43% of the companies insist on the

clients having adequate fire fighting equipment. 38% of the companies insist on good housekeeping by the client, 10% require that the clients must have trained security personnel and 10% also require that the client's building construction must be first class as shown below in table 28.

Table 28: Safety Measures

Safety precautions	Percent
Good housekeeping	38
First class construction	10
Adequate fire fighting equipment	43
Trained security personnel	10

4.4.16 Surveys of Fire Risks

Different companies do surveys of fire risks at different times. 29% of the companies indicated that they carry fire risks surveys periodically, 9% indicated that it depends on the sum insured. Most of the companies (51 %) did surveys during the first renewal, 5% did surveys after the third renewal if there is no fire or loss that occurred. Surveys would also be done if the risk is mega or the client did not describe the risk properly. 5% of the companies indicated that they did surveys before quoting for a fire policy whereas 5% also indicated that they carried out surveys after a loss had occurred.

Table 29: When Surveys are Done

When surveys are done	Percent
During first renewal	5
After third renewal if no fire/loss occurs	5
When sum insured is above certain limits	19
When location is prone to risk	5
All the time and when the loss occurs	10
Before insuring and thereafter periodically as agreed	14
After a loss has occurred	5
When risk is mega and when the risk is not properly described by client	5
Periodically	29
Before quotation	5

4.4.17 Responsibility of Surveying

For most of the companies (52%), surveys are done by both internal and external surveys i.e. company staff carry out surveys when the risk is considered to be small whereas external surveyors are involved if the risk is perceived to be major. But 48% of the companies use independent surveyors who must be registered as shown below in table 30.

Table 30: Responsibility of Surveying

Who does the surveys	Percent
Independent surveyors	48
Internal and external surveyors	52

4.4.18 Implementation of Survey Recommendations

The insurance companies use various methods to ensure that survey recommendations are implemented.

These include re-surveying (38%), impromptu surveys (19%) follow up visits (24%), getting frequent updates from brokers (10%) and by loading rates in case of failure to implement survey recommendations (5%).

Table 31: Ways of Enforcing Survey Findings

Method	Percent
By re-surveying periodically	38
Impromptu surveys	19
Follow up visits	24
Incorporating conditions in the policy	5
Getting frequent updates from brokers	10
Loading of rates in case of failure to implement recommendations	5

4.4.19 Common Survey Findings

When surveys are done for fire risks the most common findings include lack of fire fighting equipment (33%), poor house keeping (29%), improper storage (19%) lack of trained fire fighting teams (10%), lack of water and pressure (5%) and poor electrical installations (5%) as shown in table 32 overleaf.

Table 32: Common Survey Findings

Common survey findings	Percent
No fire fighting equipment	33
Poor housekeeping	29
Improper storage	19
Lack of trained fire fighting teams	10
Lack of water and pressure	5
Poor electrical installations	5

4.4.20 Reduction of claims as a result of implementation of survey recommendations

Majority of the companies (95%) indicated that claims reduced as a result of implementation of survey recommendations whereas only 5% were non committal on the issue.

Table 33: Reduction of Claims

Reduction of Claims	Percent
Yes	95
Non committal	5
Total	100

4.4.21 Set Risk Standards for Acceptance to Provide Fire Covers.

The set risk standard for acceptance to provide fire covers include good housekeeping (48%) acceptable hazard grade 1-8 (10%) , those specified in the tariff (33%) .10% of the companies indicated that they did not have any set risk standard for acceptance to provide fire covers.

Table 34: Set Risk Standards for Acceptance to Provide Fire Covers.

Set risk standard	Percent
Good housekeeping	48
Hazard grade should be within acceptable limits(1-8)	10
According to the fire tariff	33
None	10

4.4.22 Fires Reported in the Last Ten Years

Some of the companies in the industry have dealt with multiple fires in the last 10 years. The main cause of the losses totaling to over Kshs 4.7 billion in the last 10 years was fire in the companies sampled who disclosed the fire claims they have paid as seen in table 35 overleaf.

Table 35 Fires Reported in the Last Ten Years

Property/description of loss	Cause of loss	year	Kshs(Estimated millions)
African Safari Hotels	Fire	2003	400
Pegant Ltd	Fire	2002	820
Pyrethrum Board	Fire	2003	230
Undisclosed	Fire	1998	55
Undisclosed	Fire	1996	23
Undisclosed	Fire	2000	24
Undisclosed	Fire	2003	24
Dubai Electronics	Fire	1997	72
Kifaru Textiles	Fire	2001	65
Ngong Hills Hotel	Electrical fault	1997	4
Fire damage to stock and Godown	Fire	1997	300
Undisclosed	flood damage	1998	20
Fire damage to stock	Fire	1998	20
Two Fishes Hotel	Fire	1997	60
Seascapes Ltd	Fire	1998	54
Muhoroni Sugar	Electrical fault	2004	50
Comply Industries	Fire	2001	26
Kenya Power & lighting	Explosion	1999	20
Mutuya Holdings	Fire	1998	14
Nairobi City Council	Arson	2004	50
Economic Carriers	Fire	1998	9.7
Mastermind Tobacco	Fire	2003	3.5
Damage to green houses	Fire	2001	15
Pan Paper Mills	Fire	-	954
Tropical Beach	Fire	-	200
Uchumi Supermarkets	Fire	-	352
Multi packaging	Fire	-	76
Bata Shoe Co.	Fire	-	400
Africa Safari	Fire	-	800
Total			4.741

5.1 Discussion

5.1.1 Fire Perils

The majority of the underwriters consider the perils of storm and flood, and earthquake as main perils when rating fire risk. The reason for considering storm and flood as main perils during fire rating could be because the perils have a higher probability of causing a loss. Nairobi has been hit by minor earthquakes in the past, while Rift Valley is considered a highly potential area.

The peril of explosion, possibility of collision and impact, riot and strike, subsidence and ground heave, and malicious acts are also regarded as major perils during fire rating, but not as those perils discussed above.

This could be due to the fact that the perils could be contained if adequate fire fighting equipment are available. However in the case of subsidence and ground heave these are difficult to contain if a catastrophe has happened, hence I expected underwriters to consider them in the same category as earthquake and flood.

Theft act peril was the least considered by underwriters as perils affecting fire rating. This can be attributed to underwriters not appreciating that after a fire loss, theft occur when the contents are exposed. However, underwriters may also expect that the client will secure contents after a fire loss.

The underwriters also indicated that bush fire and arson are also considered as major perils in fire rating while the perils of aircraft, volcanic eruptions, spontaneous formulation, subterranean fire, burst pipes, lightning damage, physical and moral hazards, winds and tempest, threat of terrorism, are perils affecting fire rating but not perils considered as significant when rating. This

could be attributed to the fact that they are additional perils which are optional to the client.

5.1.2 Factors that affect fire Rating

The main factors considered by underwriters as affecting the fire rating are construction class, occupancy and fire safety precautionary measures.

This could be attributed to the fact that construction class like pavement and wooden works increase or reduce chances of fire loss while none hazardous use or presence of safety precautions measures can minimise the risks of fire hence better rating.

Other factors considered as factors affecting fire rating but not as significant as those above are; history of loss and experience, market competition, probable period of interruption for loss of profits, estimated maximum loss, wages basis of settlement, location of building, client neighbourhood, sum insured and size of risk, treaty terms, overall insured portfolio, brokers pressure, proximity and accessibility of fire brigade, spread of the risk, deductibles and deletion of electrical, petrol and mineral oil clauses.

5.1.3 Rating process.

Most of the companies sampled have an agreed rating format, where they use the occupancy, construction, hazard grade, sum insured, loss experience, fire protection and use tariff guide to determine the basic rate.

They then give discounts for good risks and protection, while they penalise clients for the converse by loading the rate.

However the discounts and penalties are not standard and vary from one client to another.

Underwriters more often than not do not physically verify the class of risk and safety precaution before rating, but rely on information provided by client which at times can be misleading or not sufficient.

The majority of the companies however refer risk with sums insured of over Kshs 150 million to the rating committee.

5.1.4. Surveys of fire risks

Most companies do surveys at renewals but this is not a precondition for rating despite the fact that they have no experience on some risks. There are no regular follow ups done to ensure implementation despite the fact that implementation of survey findings can substantially mitigate loss.

5.2 Conclusions

5.2.1 Fire rating practices in Kenya

5.2.2 Perils that affect fire rating

All the perils had mean scores of above 4 except theft acts peril on a five point likert scale. It can therefore be concluded that fire rating is affected by the following perils to a very large extent:

- Explosion peril
- Earthquake peril
- Storm and flood peril
- Collision and impact peril
- Riot and strike peril
- Subsidence and ground heave peril
- Malicious acts peril

5.2.3 Factors that affect fire rating

From the findings of the survey it can be concluded that the following various factors affect fire rating to a great extent.

- Construction class
- Occupancy
- Fire safety precautionary measures
- History of loss and experience
- Market competition
- Probable period of interruption for loss of profits policy
- Wages basis of settlement for loss of profits policy
- Location of building
- Client neighborhood
- Sum insured and size of risk
- Treaty terms
- Overall insured portfolio
- Brokers pressure
- Proximity of fire brigade and other fire fighting equipment
- Spread of risk
- Deductibles
- Deletion of electrical, petrol and mineral oil clauses

5.2.4 Rating Process

Though the companies varied in the method used to do rating, there was similarity in the use of the fire tariff. The fire tariff formed the basis of the rating process from which other factors are applied so as to make or give a rate. It is also common practice in the industry to refer cases above certain limits to the Association of Kenya Insurers (AKI) and reinsurers.

5.2.5 Rating formats

Most insurance companies in the industry have standard formats or guidelines for rating fire

5.2.6 Discount given for semi superior and superior construction

From the findings it can be concluded that discounts given in this area are not exactly fixed but range from 2.5% to 12.5%.

5.2.7 Safety precautions

It can also be concluded that the presence of safety precautions like good fire fighting equipments at the clients premises affects the rating of fire to a large extent and therefore attracts discounts during rating. The main reason for this was because the existence of fire fighting equipment minimized the risk .

5.2.8 Procedures followed in rating a risk

As much as there are different procedures followed in the industry to rate risks, the most common being underwriters determine the occupancy, construction, hazard grade, sum insured, loss experience, fire protection, and use the tariff guide to determine base rate and charge for each extension cover then allow discount for safety precautions.

For market risks i.e. over 150m most underwriters refer them to rating committee.

5.2.9 Rate loading over and above the standard fire rate for various extensions

There is no standard loading over and above the standard fire rate that is applied for various extensions.

- Stock floater cover attract different loading in the industry. There was no standard rate in the industry for this cover, however from the survey sample it ranges from 10% -50%.
- Industrial All Risks (IAR) also attract different loading in the industry and did not follow a standard rate. However from the survey sample it ranges from 10%-25%.
- For the Loss of Profits policy cover, it can be concluded that the rate for this cover depends largely on the indemnity period.
- For the mineral oil warranty deletion, it can be concluded that the loadings range from 2.5%-5%.
- Special perils i.e. storm, wind, volcanic eruption and subsidence were given loadings ranging from 0.25%-0.375%.

5.2.10 Fire rating prerequisites

The industry has expectations from clients before accepting fire policy proposals in terms of safety precautions. Good housekeeping, first class construction, adequate fire fighting equipment and trained personnel are the basic safety precautions prerequisites by the industry before accepting fire policies.

5.2.11 Compliance of surveys

The industry usually carries out survey periodically to check compliance with the safety requirement. These surveys are mostly done by independent surveyors but also company staffs are used where the sums insured are comparatively small. It is also common practice in the industry to re-survey after the policy has been issued so as to ensure compliance on safety measures required and general housekeeping.

The most common findings during such surveys reveal clients slackness in putting in place adequate safety precautionary measures. It can also be

concluded that implementation of survey findings reduces claims which have cost over KShs 4.7 billion in the last ten years.

The industry has suffered huge losses caused by fire in the last 10 years and the following recommendations are made so as to avoid such losses in future

5.3 Recommendations

The industry should formulate generally accepted rating standard guidelines and the Commissioner of Insurance should ensure these guidelines are followed by all players in the industry. The industry should enforce safety precautionary measures so as to minimize risk and claims and educate the clients on the benefits of these measures. The industry should also enhance compliance with survey recommendations so as to minimize risk and claims.

5.4 Suggestions for further research

As stated earlier in the introduction, rate is the price of a unit of insurance. The cost of production in the insurance industry unlike other industries is not known until sometime in the future when the policy has expired.

This makes the pricing process in the insurance industry more complicated and hence requiring generally accepted rating guidelines.

Future research should focus on comparing the performance of companies in countries with generally accepted rating guidelines with the performance of the Kenyan insurance industry and also seek to establish how the generally accepted guidelines were formulated in those countries.

6.0 REFERENCES

Benjamin B, (1977), **General Insurance**, London: Oxford Press.

Charles E.H, (1985), **Property and Pecuniary Insurance**, London: CII Press.

Collins C W (1991), **Property and Casualty Claims**, London: Redwood Press Ltd.
Melksham wilts.

Collin S, (1981), **Insurance of Liability**, London: Longman Publishing Ltd.

Commissioner of Insurance (2002): **Report of the Commissioner of Insurance for the year 2002**, Nairobi: Jomo Kenyatta Foundation.

Crowe R.M, Ronald C.H, (1967), "The meaning of risk", **Journal of risk and insurance**,
P. 459 – 479.

Emmett J.V., Therese V (1999), **Fundamentals of risk and insurance**, New York:
Behigh Press U.S.A.

Durrant J.E, Wilking R, (1991), **Property Insurance Underwriting**, London: CII Press

Githiga, "Benefits of Insurance, Kenya", **The Insurance Focus**, Issue No. 11

Hansell D.N. (1974), **Elements of Insurance**, London: Macdonald and Evans Ltd

Insurance Institute of Kenya (2000), **A guide to Insurance Industry**, Kenya: P. 6465

Kibera F.N. (1996), **An Introduction to business**, Nairobi: Kenya Literature Bureau.

Mwangi A.M.,(2000) **A Survey of Corporate Governance practices among insurance companies in Kenya**.Unpublished MBA University of Nairobi.

Ngaru T, (1998) "Industry must expouse new positive products", **Daily Nation**, August 11thP.8.

Reinecke M.F.B. and Merwe S.V.D, (1989), **General principles of Insurance**, London: Butterworth Publishers

Rejda G (2001), **Principles of Risk Management and Insurance**, Singapore: Pearson Education Inc.

Swiss Re (1992), "**Fire of the future**": Zurich: SR, Pp.8

William H.A.C (1967), **Perils named and unnamed**, New York : McG'raw Hill Inc.

Insurance Act Cap 487, (1987), Kenya : Government Press.

APPENDIX A.

Questionnaire

Introduction

This questionnaire aims to collect information on fire rating in the insurance industry. Information given shall be treated confidentially and used for academic purposes only. Please complete all the questions.

SECTION 1

COMPANY DATA

Designation of Respondent : Underwriting Manager

Type of Company : Private Limited Liability Company
: Public Limited liability company
: Mutual Insurance Company
: Cooperative Insurance Company

Name of the Company.....

Year of establishment.....

Current number of employees.....

Types of business underwritten

General

Life and Pensions

Composite

SECTION II

1.) This section is intended to collect information on fire perils. Please indicate the extent to which you agree with the following statements about fire perils. Scale: 1=strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly agree. Please tick appropriately below

Statement	Strongly agree	Agree	Neither Agree disagree nor	Disagree	Strongly disagree
1) Explosion peril affects our fire rating					
2) Earthquake peril affect our fire rating					
3) Storm and flood peril affects our fire rating					
4) The possibility of collision and impact peril affects our fire rating.					
5) Is rating of your fire policy affected by riot and strike peril?					
6) Theft acts perils affect fire rating.					
7) Subsidence and ground heave perils would affect fire rating					
8) Malicious acts perils affect fire rating					

2.) Apart from the above, does any other peril affect your fire rating, please specify below

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SECTION III

This section aims to get information on the factors that affect fire rating

3) Please indicate the extent to which you agree with the following statements on the factors that affect fire rating. Scale: 1=strongly disagree,2=Disagree,3=Neither agree nor disagree,4=Agree,5=Strongly agree. Please tick appropriately below.

Statement	Strongly Agree	Agree	Neither Agree Nor disagree	Disagree	Strongly disagree
1) Construction class affects the rating of fire					
2) Occupancy affects the rating of fire.					
3) Does fire safety precaution measures affect fire rating?					
4) A history of loss and experience affect fire rating					
5) Market competition affects fire rating					
6) The probable period of interruption (IP) for loss of profits policy affects fire rating.					
7) The probable maximum loss(PML) affects fire rating					

8) The estimated maximum loss (EML) affect fire rating					
9) Wages basis of settlement i.e. dual or basic affect fire rating					
10) Location of building affect rating					
11) Client neighborhood affect fire rating					
12) Sum insured and size of risk affect rating					
13) Treaty terms affect fire rating					
14) Overall insured portfolio affect fire rating					
15) Brokers pressure affect fire rating					
16) Proximity and accessibility of fire brigade and other fire fighting equipment affect rating					
17) Spread of the risk affect fire rating					
18) Deductibles affect fire rating					
19) Deletion of electrical, petrol and mineral oil clause affect fire rating					

4) Specify any other factors apart from the above that have an effect on your fire rating.

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SECTION IV: Rating Process

The section aims to get information relating to the rating process.

1) Describe the rating process of your organization below.

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2) Do you have a standard rating format? Yes No
If yes, please explain below.

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3) What discounts do you give for?
Semi superior construction
Superior construction

4) Does the presence of various safety precautions like sprinklers attract any discounts?
Yes No

If yes please explain.....

5) What rate reductions do you give for various deductibles? Please state below.

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6) What rate reductions do you give for Long Term Agreements? Please state below

- i) 3 yrs (ii) 5 yrs (iii) 10 yrs

7) What loading do you apply for various special perils? Please state below

- i.e i) Floods (ii) Volcanic eruption (iii) Subsidence

(iv) Storm (v) Wind (vi) etc

8) Does deletion of mineral oil warranty attract a loading in your rate applicable? Please state below

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9) What loading do you apply for a stock floater cover over and above fire and peril assuming all parameters are the same.

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10) What loading do you apply for IAR (Industrial All Risk) over and above fire and peril assuming all parameters are the same.

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11) What rates do you offer for loss of profits policy over and above fire and peril assuming all parameters are the same.

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12) Please state below the precise procedure that you follow to rate a risk i.e format and approval process.

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13) Are there risks that you cannot rate from your office? If so, how do you go about it.....

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SECTION V: Safety Precaution Measures

This section is intended to get information regarding precautionary measures.

1) What safety precautions do you insist on for clients to put in place before accepting a fire policy proposal? Please state below.

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2) When are surveys done for fire risks? Please state below.

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3) Who does the surveys? Please state below.

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4) How do you ensure survey recommendations are implemented?

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5) Has there been reductions on claims where survey recommendations have been implemented? Yes No

6) What are the most common survey findings for fire risks? Please state below.

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7) Are there set risk standards for acceptance to provide fire covers? If yes please state

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8) How many major fires have been reported in your organization in the last 10 years?.
Please summarise risk detail and causes.

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APPENDIX B.

List of Licensed Insurance Companies

As per Commissioner's Report (2003)

1. American Life Insurance Company Ltd.
2. Amarco Insurance Co. Ltd.
3. Apollo Insurance Company Ltd.
4. Blue Shield Insurance Company Ltd.
5. British American Insurance Company Ltd.
6. Cannon Assurance Company Ltd.
7. Concord Insurance Company Ltd.
8. Cooperative Insurance Co Ltd.
9. Corporate Insurance Company Ltd.
10. Fidelity Shield Insurance Company Ltd.
11. First Assurance Company Ltd.
12. Gateway Insurance Company Ltd.
13. Geminia Insurance Company Ltd.
14. General Accident Insurance Company Ltd
15. Heritage All Insurance Company Ltd
16. Intra Africa Insurance Company Ltd
17. Invesco Assurance Company Ltd.
18. Insurance Co of E.A Company Ltd.
19. Jubilee Insurance Company Ltd.
20. Kenindia Assurance Company Ltd.
21. Kenya Orient Insurance Company Ltd.
22. Kenyan Alliance Insurance Company Ltd.
23. Lion of Kenya Insurance Company Ltd.
24. Madison Insurance Company Ltd.
25. Mercantile Life & General Insurance Company Ltd.

26. Monarch Insurance Company Ltd.
27. Occidental Insurance Company Ltd.
28. Pan Africa Insurance Company Ltd.
29. Phoenix of E.A Insurance Company Ltd.
30. Pioneer Insurance Company Ltd.
31. Royal Insurance Company Ltd.
32. Standard Assurance Company Ltd.
33. Tausi Insurance Company Ltd.
34. Trident Insurance Company Ltd.
35. UAP Provincial Insurance Company Ltd.
36. United Insurance Company Ltd.